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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/604,628	06/27/2000	Glenn H. Kuenzler	LD 11358 GEC 2 0467	5219

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EXAMINER

SANTIAGO, MARICELI

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 10/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

Applicant(s)

09/604,628

KUENZLER ET AL.

Examiner

Art Unit

Mariceli Santiago

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11 is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Amendment*

The Amendment, filed on July 21, 2003, has been entered and acknowledged by the Examiner.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 13-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Lierop et al. (US 5,557,169) in view of Tessmann (US 3,259,969).

Regarding claim 1, Van Lierop discloses a method of making a lamp electrode comprising the steps of cutting a first material to a desired length to define a first material component (33b) having a first end (31b) and a second end (35b), joining a first end of a second material (34b) to the second end of the first material (35b) component, cutting the second material to define a second material component (32b) having a second end (37b), joining a first end of the third material (30b) to the second end (37b) of the second material (32b), cutting the third material to define a third material component having a second end, and securing a coil to the second end of the third material (Column 5, lines 6-18).

Van Lierop is silent in regards to the limitation of cutting the second material after joining the first end of the second material, Van Lierop discloses manufacturing electrodes having multiple wire segments, each section is joined using well-known wire welding techniques. Tessmann discloses a method of welding wires segments, wherein each wire segment is

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supported with collets in order to provide a stable and adequate grip during a welding process. Moreover, the Examiner notes that in order to provide proper handling of the minute wire segments and facilitate cutting to specific wire lengths, particularly minute lengths, one of ordinary skills in the art would consider obvious to cut the material to the desired lengths after proper joining of the wire segments. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate a cutting step subsequently after joining in order to provide proper handling of the minute wire segments and facilitate cutting to specific wire lengths, particularly minute lengths.

Regarding claim 2, Van Lierop discloses the claimed invention except for the limitations of using a first collet to hold a first portion of the first material, using a second collet to hold a second portion of the first material spaced from the first portion, and cutting the first material at a point between the first and the second collets. However, Tessmann discloses a method of welding two pieces of wire provided with a first and second collet structures (17 and 18) holding the wire portions, furthermore, the Examiner notes that it would have been obvious to one skilled in the art to provide a cut at a location between the two collets, since along some advantages the second collet can be use to designate a specific length in which the material is cut, additionally the excess material cut from the main material component is carried away by the collet member and any mishandling of the excess material can be avoided. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to use the welding method and collet assembly disclosed by Tessmann in the method disclosed by Van Lierop in order to obtain a specific length in which the material is cut and avoid any mishandling of the excess material cut from the main material component.

Regarding claims 3 and 5, Van Lierop discloses the claimed invention except for the limitation of the steps of joining the respective ends of a material components further comprises using a first collet to hold the first or second material component, and using a second collet to

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hold the second or third material so that the first end of the second or third material is located adjacent to the second end of the first or second material, respectively. However, Tessmann discloses a method of welding two pieces of wire provided with a first and second collet structures (17 and 18), the first collet holding a first material component, and the second collet holding a second material so that the first end of the second material is located adjacent to the second end of the first material. The collet assembly is commonly used in the field of welding components in order to maintain a stable and secure hold between the components and thus obtain a solid welded surface. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the welding method and collet assembly disclosed by Tessmann in the method of Van Lierop in order to provide a stable and secure hold between the components and thus obtain a solid welded surface.

Regarding claims 4 and 6, Van Lierop discloses the claimed invention except for the limitation of using a first collet to hold a portion of at least one end of the first, second or third material, using a second collet to hold a portion of the second or third material and cutting the second or third material at a point between the first and second collets. However, Tessmann discloses a method of welding two pieces of wire provided with a first and second collet structures (17 and 18), the first collet holding a first material component, and the second collet holding a second material so that the first end of the second material is located adjacent to the second end of the first material. The collet assembly is commonly used in the field of welding components in order to maintain a stable and secure hold between the components and thus obtain a solid welded surface. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the welding method and collet assembly disclosed by Tessmann in the method of Van Lierop in order to provide a stable and secure hold between the components and thus obtain a solid welded surface.

Furthermore, it would have been obvious to one skilled in the art to cut the second or third material after joining to the end of the first or second material, respectively, and provide the cut at a location between the two collets assembly, since along some advantages the second collet can be use to designate a specific length in which the material is cut, additionally the excess material cut from the main material component is carried away by the collet member and any mishandling of the excess material can be avoided. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to provide a step of cutting the second or third material at a point between the first and second collets in the method disclosed by Van Lierop-Tessmann in order to obtain a specific length in which the material is cut and avoid any mishandling of the excess material cut from the main material component.

Regarding claim 13, Van Lierop discloses the claimed invention except for the limitation of the cutting steps further comprises cutting with a high-speed diamond saw. The Examiner notes that one of ordinary skills in the art would have considered the use of any well known cutting wire equipment including a high speed cutting saw during the cutting steps as an obvious matter of design choice, since applicant has not disclosed that the use of a high speed cutting diamond saw solves any problem or is for any particular purpose and it appears that the invention would perform equally well when using any well known cutting equipment.

Regarding claim 14, Van Lierop discloses a method wherein the steps of joining further comprise welding (Column 5, lines 6-18).

Regarding claim 15, Van Lierop discloses a method wherein the step of cutting a first material further comprises the step of supplying a niobium wire to be cut (Column 4, lines 43-46).

Regarding claim 16, Van Lierop discloses a method wherein the step of joining a first end of the second material further comprises the step of supplying a molybdenum overwind to be joined (Column 4, lines 43-46).

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Regarding claim 17, Van Lierop discloses a method wherein the step of joining a first end of the third material further comprises the step of supplying a tungsten wire to be joined (Column 5, lines 10-11).

Regarding claims 18 and 20, Van Lierop discloses the claimed invention, however, is silent in regards to the limitation of the step of joining a first end of the second or third material being performed subsequent to the step of cutting the first or second material, respectively. The Examiner notes that one of ordinary skill in the art would recognize the desirability of joining a first end of the second or third material subsequent to the step of cutting the corresponding material component in order to provide the corresponding material with an adequate and desirable length prior to the joining step. Accordingly, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to provide the step of joining a first end of the second or third material being performed subsequent to the step of cutting the first or second material, respectively, since it is desirable to provide the first or second material with an adequate and desirable length prior to the joining step.

Regarding claims 19 and 21, Van Lierop discloses the claimed invention however is silent in regards to the limitation of the step of cutting the second or third material being performed subsequent to the step of joining the first end of the second or third material, respectively. The Examiner notes that one of ordinary skill in the art would recognize the limitation of cutting the second or third material subsequent to the joining step as an obvious matter of design choice, since the option of cutting the material prior or after the step of joining does not solve any stated problem or is for any particular reason and it appears that the invention would perform equally well regardless of the chosen instance for cutting the material.

Additionally, when joining small size components the presence of additional material is an obvious advantage in order to maintain a strong and stable hold of the components, any additional material can be subsequently disposed. Accordingly, it would have been obvious at

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the time the invention was made to a person having ordinary skills in the art to provide a cutting step subsequently to a joining step as an obvious matter of design choice, since a particular instance for the cutting step does not solve any stated problem or is for any particular reason.

Regarding claim 22, Van Lierop discloses a method wherein the step of securing a coil is performed subsequent to the step of cutting the third material.

Regarding claim 23, Van Lierop discloses a method of making an electrode for a lamp comprising the steps of cutting a first material to a desired length to define a first material component (33b) having a first end (31b) and a second end (35b), welding a first end of a second material (34b) to the second end of the first material (35b) component, cutting the second material to define a second material component (32b) having a second end (37b), welding a first end of the third material (30b) to the second end (37b) of the second material (32b), cutting the third material to define a third material component having a second end, and securing a coil to the second end of the third material (Column 5, lines 6-18) and cutting the coil at a coil cutting position. Van Lierop fails to disclose the step of using collet members during each stage of the electrode components assembly and further, the steps of cutting the materials to a certain length at a position between the collet members after each welding stage thus defining a first, second and third material component. Van Lierop discloses manufacturing electrodes having multiple wire segments, each section is joined using well-known wire welding techniques.

Tessmann discloses a method of joining wires segments, wherein each wire segment is supported with collets in order to provide a stable and adequate grip during a welding process. Tessmann discloses a method comprising several stages of welding rod components. The method comprises providing in the first stage a pair of collets to hold at least two rod components and positioning the collets adjacent to each other for welding the first component to the second component, after the first welding stage, a first collet is displaced or advanced to a



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second position along the end portion of the welded rod components, while a second collet, provided with another rod component, is placed adjacent to the first collet and thus continuing a next stage of the welding assemblage. Accordingly, the usage of collets as holding members for welding processes is within the teachings of Tessmann in order to maintain a stable and secure hold between the components and thus obtain a solid welded surface. It would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the collets member and welding process disclosed by Tessmann in the manufacturing process of Van Lierop in order to hold and position the rod components adjacent to each other, which provides a stable and solid hold of the material components during welding procedures.

Moreover, the Examiner notes that in order to provide handling of the minute wire segments and facilitate a cutting process to specific wire lengths, particularly minute lengths, one of ordinary skills in the art would consider obvious to cut the material to the desired lengths after proper joining of the wire segments. Furthermore, cutting the material components at a location between two collets location would allow the second collet to be use to designate a specific length in which the material is cut, additionally, the excess material cut from the main material component is carried away by the collet assembly avoiding any mishandling of the excess material. Accordingly, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate a cutting step subsequently after joining and at a location between two collets assembly in order to obtain proper handling of the minute wire segments and facilitate a cutting process to specific wire lengths, particularly minute lengths, while avoiding any mishandling of the excess material cut from the main material component.

Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Lierop et al. (US 5,557,169) in view of Freeman (US 3,132,409).

Regarding claim 7, Van Lierop discloses the claimed invention except for the limitation of wherein the step of securing further comprises pushing the coil over an end of the third material. In the same field of endeavor, Freeman discloses a method of assembling electrodes wherein the coil is pushed over the end of the core material in order to provide an electrode-coil assembly by means of force fit without the requirement of welding or the like. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the method of assembling the coil portion to an electrode as disclosed by Freeman in the method of Van Lierop in order to provide an electrode-coil assembly by means of force fit without the requirement of welding or the like.

Regarding claims 8 and 9, Van Lierop discloses the claimed invention except for the limitation of the step of securing further comprises selecting a coil having an inner diameter that is smaller than an outer diameter of the third material and further rotating at least one of the coil and the third material component for causing the coil to open as it is pushed over the end of the third material component. In the same field of endeavor, Freeman discloses a method of assembling electrodes wherein a coil portion has an inner diameter that is smaller than an outer diameter of a rod electrode and the rod electrode is rotated within the coil in order to provide an electrode-coil assembly by means of force fit without the requirement of welding or the like and permit the necessary force to be exerted on the rod without causing the coil to collapse or become distorted. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the method of assembling the coil portion to an electrode as disclosed by Freeman in the method of Van Lierop in order to provide an electrode-coil assembly by means of force fit without the requirement of welding or the like and

permit the necessary force to be exerted on the rod without causing the coil to collapse or become distorted.

Regarding claim 10, Van Lierop discloses the claimed invention except for the limitation of wherein the step of securing further comprises press fitting the coil to the second end of the third material component. In the same field of endeavor, Freeman discloses a method of assembling electrodes wherein the coil is press-fitted over the end of the core material in order to provide an electrode-coil assembly by means of force fit without the requirement of welding or the like. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the method of assembling the coil portion to an electrode as disclosed by Freeman in the method of Van Lierop in order to provide an electrode-coil assembly by means of force fit without the requirement of welding or the like.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Lierop et al. (US 5,557,169) in view of Anderson et al. (US 2,687,489).

Regarding claim 12, Van Lierop discloses the claimed invention except for the limitation of wherein the step of securing further comprise fusing the coil to the second end of the third material component. However, in the same field of endeavor, Anderson discloses a method of manufacturing a rod electrode comprising a step of securing a coil to the end of the electrode by fusing the coil the end of the rod electrode in order to provide a secure seal between the coil and the rod electrode. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the coil and rod electrode assembly disclosed by Anderson in the method of Van Lierop in order to provide a secure seal between the coil and the rod electrode.

***Response to Arguments***

Applicant's arguments filed July 21, 2003 have been fully considered but they are not persuasive.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In regards to claims 1 and 23, Applicant argues that the reference fails to disclose a cutting function with regards to the manufacture of a current supply conductor, the Examiner respectfully disagree. While Van Lierop reference fails to explicitly disclose a cutting function step, it is the Examiner position that such limitation is inherently disclosed by Van Lierop teachings of the structural limitations, i.e., the wire components are cut to a desired length during manufacturing process of the electrode structure. Van Lierop is silent in regards to the limitation of joining the wire segments and cutting the material after the joining step or the used of collets during the joining and cutting steps. The Examiner relies on the teachings of Tessmann to teach joining and handling wire sections with the use of collets assemblies in order to obtain proper handling of the wire segments and facilitate a cutting process to specific wire lengths while avoiding any mishandling of the excess material cut from the main material component. Furthermore, cutting the material after proper joining of the wire segments would be considered obvious to one of ordinary skills in the art, since such step would allows an adequate handling of the minute wire segments and facilitate cutting to specific wire lengths, particularly minute lengths.

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Accordingly, for the reasons stated above, the rejection is deemed proper.

***Allowable Subject Matter***

Claim 11 is allowed over the prior art of record.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariceli Santiago whose telephone number is (703) 305-1083. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (703) 305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

*MS* 10/6/03  
Mariceli Santiago  
Patent Examiner  
Art Unit 2879

*Kenneth J. Ramsey*  
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PRIMARY EXAMINER